1: Bowen C-4 (1945-1947) 1951 MK2 Maritime Arabs MK2

mawarid. O'Shea relates that in Oman the pearl is commonly referred to as *qumash*, which is also Arabic for "material" or "goods."[10]

Pearl-bearing oysters are found in most of the Persian Gulf waters in depths varying from just below low tide to 20 fathoms. On the Persian side of the Gulf the bottom falls off rapidly to the 50-fathom maximum in the Gulf. On the Arabian side the bottom slopes off gently so that there are extensive areas within the 20-fathom limit. Thus, there are few pearl oysters on the Persian side, although fine pearls have been reported from near Kharaq Island off Bushire, and from Lingeh, but these are exceptions. However, extensive pearl beds are found along the Arabian side, stretching almost continuously for 700 miles from near Ras al-Khaymah east of Sharjah on the Trucial coast, to Ras al-Misha'ab south of Kuwait, the best beds being between 5 and 10 fathoms. The most productive are located to the north and east of Bahrein Island; this is probably why Bahrein has been the pearl center of the Persian Gulf. However, Dr. A. E. Alexander, a leading authority on pearls who visited the banks in 1947, estimates that only 35 percent of the Gulf pearls come from around Bahrein Island; the remainder comes from the Trucial Coast and from the banks near Kuwait.

The success of any pearling season seems to be as unpredictable as the habits of the pearl oysters themselves; the oyster beds shift periodically so that their exact location is not known until the diving starts. Sometimes the pearls are plentiful and valuable, at other times they are neither. Sometimes a bank is sterile for several seasons; then the next it may yield all the highest quality pearls. None of the banks are charted; each *nakhoda* has his own knowledge of them and his own theories. Arab experts believe that the largest, most dense, and whitest pearls come from deep water, while shallow water yields only low density pearls tinted with some color. Some of the more pessimistic Arab observers claim that the Persian Gulf fisheries never yield over two first-quality necklaces in any one season.

[10] Raymond O'Shea, *Sand Kings of Oman* (London, 1947), p. 133.

3: Bowen C-4 (1945-1947) 1951 MK2 Maritime Arabs MK2

FISHWEIRS

[285] 226 The largest catch of fish on the Persian Gulf coast of Saudi Arabia and Bahrein Island comes from huge weirs, made from the stems of palm trees. The Arabs build these fencelike traps by driving a steel bar into the mucky bottom and inserting a palm stem into the hole as they withdraw the bar (Fig. 13); the stems are spaced close enough so that no fish can pass through and are tied together. There are two types of weir: a funnel type and a spear type.

[133] In the Persian Gulf the maximum tidal drop is about eight feet. The fishweirs are built so that at low tide there is only a few feet of water on the offshore end of the weir. Where the ebbing tide sets up a definite current, the funnel type (Fig. 7) is used, placed so that the current washes through the trap. The fish carried along in the current are forced through the funnel into the stockade of the weir, the entrance of which is out of water at low

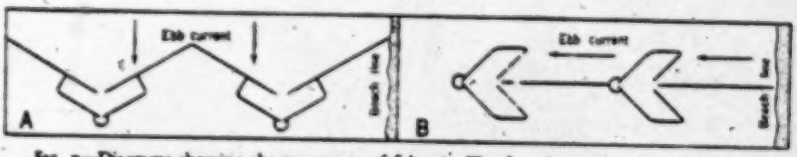

FIG. 7.—Diagrams showing the two types of fishweir. The funnel type (A) catches fish that are washed into the enclosure on an ebbing tide. The spear type (B) is most effective in the case of fish moving parallel to the shore, since the ebbing tide causes only a slight current. Both types are found either singly or in a row, as illustrated.

tide. These weirs are usually built with the central axis parallel to the shore; however, in Tarut Bay many are not near any shore but are set across tidal currents in shallows. Sometimes several traps are set in a row. It is not exceptional for the ebb current in Tarut Bay to reach three knots in some places.

Where the tidal ebb sets up merely a slight motion, the spear type of weir (Fig. 7) is used; the axis is oriented at right angles to the shore. As with the funnel type, several weirs are sometimes set in a row. Most of the fishweirs on Bahrein Island are of this type. The fish swim inshore on a flooding tide and out on an ebbing tide, and thus tend to work into the weirs; these traps are most effective in catching schools of fish swimming parallel to the shore. This type of weir is less effective than the funnel type, because its action is less positive.

Thus when the tide has gone out, the fisherman has a stockade of fish. He enters this stockade, or "head" of the weir, which is 10 to 15 feet in diameter (Fig. 8), with a net hitched to two 3-foot palm-stem poles. Holding

[Text continued on p. 391]

3: Bowen C-4 (1945-1947) 1951 MK2 Maritime Arabs MK2

wave action, completely leveled almost all the 10 fishweirs on the Tarut Bay side of the Ras Tanura peninsula. All during the fishing season constant maintenance is necessary (Fig. 13).

Because of its shoal water, Tarut Bay is the only place along the Persian Gulf coast of Arabia where large fishweirs can be built, and one of the best weir locations in Tarut Bay is off the Ras Tanura peninsula. Things went peacefully among the weir tenders and owners until 1945, when the Saudi Arabian refinery project started in high gear. A deepwater oil-loading pier was built on the Gulf side of the end of the peninsula, and a huge pipeway was run from this pier to the refinery, some eight miles away. The pipeway passed close to several of the Tarut Bay fishweirs, and the considerable fill dumped into the bay changed the shore contour slightly

The Arab fishweir owners, ever alert to monetary opportunity, brought suits against the Arabian American Oil Company, asserting that the change in contour had reduced their fish catches and that the company's grading equipment had damaged some of their weirs. After the refinery was partly completed in October, 1945, oil was occasionally spilled into Tarut Bay and provided another complaint for the Arabs, who said that the oil contaminated their weirs. These complaints were such an annoyance to the oil-company executives that they instructed their agents to buy the fishweir rights. By 1947 only three of the original 10 weirs were left; the total price paid was about 72,000 Saudi riyals ($22,000). This money enriched the few Arabs who held the rights to the weirs, but to the Arabs in the Qatif Ras Tanura area the sale was an economic blow, for much of the fish supplied to Hasa Province came from the Ras Tanura traps.

Rock Mining

Another marine occupation is the "mining" of dead coral rock. Two types of coral are mined: *faroush* and *hasa*. Faroush is found on flat bottoms in level layers three to six inches thick. Four-man diving crews, operating from shallow-draft dhows[1] 30 to 45 feet long, pry a huge slab loose with iron bars or by simply lifting its edge. A rope is thrown around the slab, and it is hauled to the dhow, where it is broken up into easily handled pieces (Fig. 14). Diving for faroush can be relatively dangerous: I saw a diver with

[1] For a description of the dhows used in the marine industries of eastern Arabia see R. LeB. Bowen, Jr.: Arab Dhows of Eastern Arabia, *Amer. Neptune*, Vol. 9, 1949, pp. 87–132. The dhows are usually *jalbuts* (see Fig. 3 of the present article), but Bahrein and Kuwait send many *booms* and *sambuks* to the pearl fisheries in addition to the jalbuts. A few small *shoots* and *battams* are also used by the fishermen (see Fig. 4 of the present article).